		DEPARTMENT	ATE OF UTAH OF NATURAL RES F OIL, GAS AND N			FOR	M 3	
APPLI	CATION FOR	PERMIT TO DRILL	-		1. WELL NAME and	d NUMBER Thurston 5-19-9-24		
2. TYPE OF WORK  DRILL NEW WELL	REENTER P8	A WELL DEEPE	N WELL		3. FIELD OR WILDCAT DEVILS PLAYGROUND			
4. TYPE OF WELL  Gas We	ell Coalb	ed Methane Well: NO			5. UNIT or COMMUNITIZATION AGREEMENT NAME			
6. NAME OF OPERATOR	THURSTON ENER				7. OPERATOR PHONE 214 704-3896			
8. ADDRESS OF OPERATOR 365 \	W. 50 N. Ste W-8	3, Vernal, UT, 84078			9. OPERATOR E-MAIL rourton@thurstonenergy.com			
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) U-31266  11. MINERAL OWNERSHIP FEDERAL INDIAN STATE			12. SURFACE OWN	NERSHIP NDIAN STATE	FEE			
13. NAME OF SURFACE OWNER (if box 12 = 'fee')			14. SURFACE OWN	NER PHONE (if box	12 = 'fee')			
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')			16. SURFACE OWN	NER E-MAIL (if box	12 = 'fee')			
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')		18. INTEND TO COM MULTIPLE FORMATI YES (Submit C		-	19. SLANT  VERTICAL D	IRECTIONAL 🗍 H	ORIZONTAL 🗍	
20. LOCATION OF WELL	FO	OTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN	
LOCATION AT SURFACE	1845 F	NL 682 FWL	SWNW	19	9.0 S	24.0 E	S	
Top of Uppermost Producing Zone	1845 F	NL 682 FWL	SWNW	19	9.0 S	24.0 E	S	
At Total Depth	1845 F	NL 682 FWL	SWNW	19	9.0 S	24.0 E	S	
21. COUNTY UINTAH		22. DISTANCE TO N	EAREST LEASE LIN 682	IE (Feet)	23. NUMBER OF ACRES IN DRILLING UNIT 1600			
		25. DISTANCE TO N (Applied For Drilling		SAME POOL	<b>26. PROPOSED DEPTH</b> MD: 8000 TVD: 8000			
27. ELEVATION - GROUND LEVEL 5184		28. BOND NUMBER	UT-000181		29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE White River Permit #49-2286			
3104		Δ1	TTACHMENTS					
VERIFY THE FOLLOWING	ARE ATTACH	ED IN ACCORDAN	CE WITH THE U	TAH OIL AND	GAS CONSERVAT	ION GENERAL R	ULES	
WELL PLAT OR MAP PREPARED BY	LICENSED SUR	VEYOR OR ENGINEER	R COM	IPLETE DRILLIN	G PLAN			
AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE) FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER								
DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY TOPOGRAPHICAL MADE)				ΑP				
NAME Russell H. Cox	тіт	<b>LE</b> Operations Manager	r	PHONE 43	5 789-8580			
SIGNATURE	DA.	<b>TE</b> 12/27/2010		EMAIL rus	sell.cox@thurstonener	gy.com		
API NUMBER ASSIGNED 43047514260000	API	PROVAL		Bro	00 EJÚL			
				Peri	nit Manager			

API Well No: 43047514260000 Received: 12/27/2010

	Proposed Hole, Casing, and Cement					
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	12.25	8.625	0	2000		
Pipe	Grade	Length	Weight			
	Grade J-55 ST&C	2000	24.0			

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API Well No: 43047514260000 Received: 12/27/2010

	Proposed Hole, Casing, and Cement					
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	5.5	0	8000		
Pipe	Grade	Length	Weight			
	Grade N-80 LT&C	8000	17.0			

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365 West 50 North STE. W-8 Vernal, UT 84078 (435)789-8580

### 10 Point Plan

### **Thurston Energy Operating Company**

### Thurston 5-19-9-24

Surface Location Lot 2 of Section 19, T9S, R24E, S.L.B.&M.

### 1. Surface Formation

Green River

### 2. Estimated Formation Tops and Datum

<u>Formation</u>	Depth	<u>Datum</u>
Green River	Surface	+5,184' G.L.
Wasatch	4,377'	+901'
Mesaverda	6,208'	-1142'
TD	8000	-2934'

A 12 1/4" hole will be drilled to 2,000'±. The hole will depend on the depth that the Birds Nest Zone is encountered. The hole will be drilled 400' beyond the top of the Birds Nest.

### 3. Production Formation Depth

Formation objective includes the Green River, Wasatch, Mesaverde and its submembers.

### Off Set Well information:

### Proposed:

Thurston 13-19

Bonanza 9-24-12-18

Bonanza 9-24-43-18

Bonanza 9-24-44-18

Bonanza 9-24-24-18

Hatch 923-24C

Hatch 923-24E

Hatch 923-241

Southman CYN 9-24-21-30

365 West 50 North STE. W-8 Vernal, UT 84078 (435)789-8580

### Shut in Well:

ONFIDENTIAL Bonanza 9-24-33-18 Southman CYN9-24-11-30

### **Abandon Location:**

Bonanza 9-24-34-18 Bonanza 9-24-23-18 Hatch 923-13O

Hatch 923-240

Hatch 923-25A

Chapita Fed 13

### **Abandon Wells:**

Devils Playground 21-19 PTS Beehive 11-20 NGC 1-C-24

### **Producing:**

Hatch 923-13I

Hatch 923-24A

Hatch 923-24G

Hatch 923-24K

### 4. Proposed Casing:

Hole	Casing	Weigh	t	Coupling	Casing	New/
Size	Size	#/FT	Grade	&Thread	Depth	Used
12 1/4"	8 <sup>5</sup> / <sub>8</sub> "	24#	J-55	STC	2000'	New
7 <sup>7</sup> / <sub>8</sub> "	5 ½"	17#	N-80	LTC	8000'	New

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### **Cement Program:**

### Surface Casing will be cemented from 2000' to surface as follows:

	Casing Size	Cement Type	Cement Amounts	Cement Yield	Cement Weight
Lead	8 <sup>5</sup> / <sub>8</sub> "	Premium V	250 <sup>sks</sup> +	3.82ft <sup>3</sup>	11.0 <sup>ppg</sup>
		100%, Gel 16%, Gisonite 10# sack Salt 3%, Flocele			
Tail	8 <sup>5</sup> / <sub>8</sub> "	Premium G	300 <sup>sks</sup> ±	1.15ft <sup>3</sup>	12.5 <sup>ppg</sup>
		Class "G CNT 100" Calcium Chloride 2 Flocele .25# sks			
Top Job	8 <sup>5</sup> / <sub>8</sub> "	Premium G	100 <sup>sks</sup> <u>+</u>	1.15ft <sup>3</sup>	12.5 <sup>ppg</sup>
		Class G CMT 1009 Calcium Chloride 3 Flocele 60# 50 Gal			

### Production Casing will be cemented from TD to 1800' or higher as follows:

	Casing <u>Size</u>	Cement Type	Cement Amounts	Cement Yield	Cement Weight
Lead	5 ½"	Premium V	440 <sup>sks</sup> <u>+</u>	3.82ft <sup>3</sup>	11.0 <sup>ppg</sup>
		Prem Lite II05#, Static free, .25#/s 5#sk KOL Seal, .0 10% Bentonite, .59	Cello Flake,		
Tail	5 ½"	Premium G	375 <sup>sks</sup> <u>+</u>	1.56ft <sup>3</sup>	14.3 <sup>ppg</sup>
		Class "G", .05% St 2 NaCi, .1% R-3, 2	•		

Top of tail @4000'

365 West 50 North STE. W-8 Vernal, UT 84078 (435)789-8580

### 5. BOP and pressure Containment Data:

The anticipated bottom hole pressure will be less than 3000 psi.

A 3000 psi WP BOP system as described in the BOP and pressure Containment Data (attached) will be installed and maintained from the 8 <sup>5</sup>/<sub>8</sub>" surface casing. The BOP system including the casing will be pressure tested to minimum standers set forth in "On Shore Order #2". The BOP will be mechanically checked daily during drilling operations.

### 6. Mud Program:

<u>Interval</u>	Mud <sup>wt</sup> lbs/gal	Vis. Sec/qt	Fluid Loss M1/30 <sup>mins</sup>	Mud Type
0-2000	Air/clear water	N/A	No control	Air/Water
2000-TD	8.4-12.0	30	8-10	Water/Gel

### 7. Auxiliary Equipment:

Upper Kelly cock, full opening stabbing valve, 2 ½" choke manifold and pit level indicator.

### 8. Testing, Coring, Sampling and logging:

- a) Test: None are anticipated
- b) Coring: Possibility of sidewall coring
- c) Sampling: Every 10' from 2000' to TD
- d) Logging: Type: DLL/SFL W/GR and SP @ Interval: TD to Surface Casing. Type: FDC/CNL W/GR and CAL @ interval: TD to Surface Casing.

### 9. Abnormalities (including sour gas):

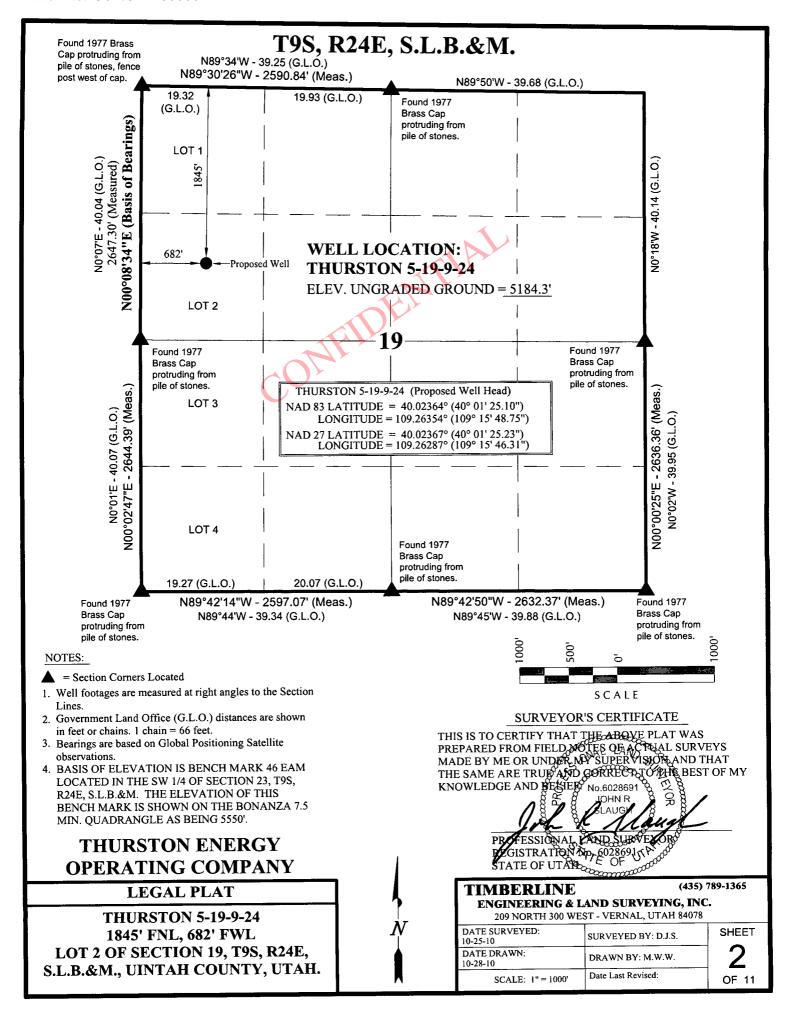
No abnormal pressures, temperatures or other hazards are anticipated. Oil and gas shows are anticipated in the Green River and Wasatch formations. Other wells drilled in the area have not encountered over pressured zones or H2S.

### 10. Drilling Schedule:

The anticipated starting date is 04/01/2011 Duration of operations is expected to be 30 days.

365 West 50 North STE. W-8 Vernal, UT 84078 (435)789-8580

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'APIWellNo:43047514260000'

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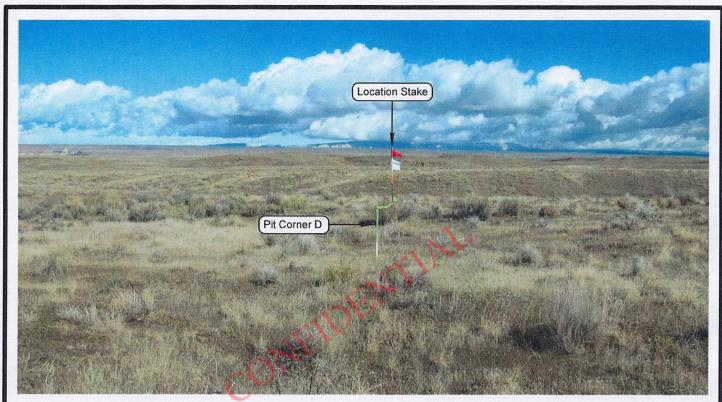


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

**CAMERA ANGLE: NORTHERLY** 



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

**CAMERA ANGLE: SOUTHERLY** 

# THURSTON ENERGY OPERATING COMPANY

### **LOCATION PHOTOS**

THURSTON 5-19-9-24 1845' FNL, 682' FWL LOT 2 OF SECTION 19, T9S, R24E, S.L.B.&M., UINTAH COUNTY, UTAH.

### TIMBERLINE

(435) 789-1365

ENGINEERING & LAND SURVEYING, INC.

209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: PHOTOS TAKEN BY: D.J.S.

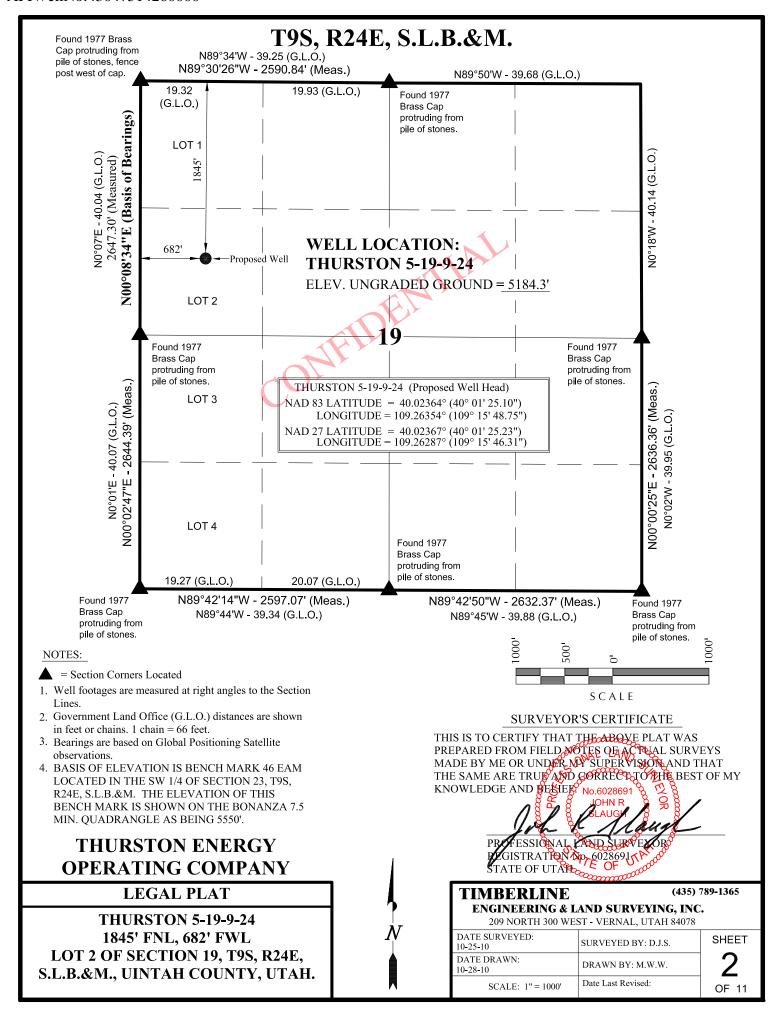
DATE DRAWN: DRAWN BY: M.W.W.

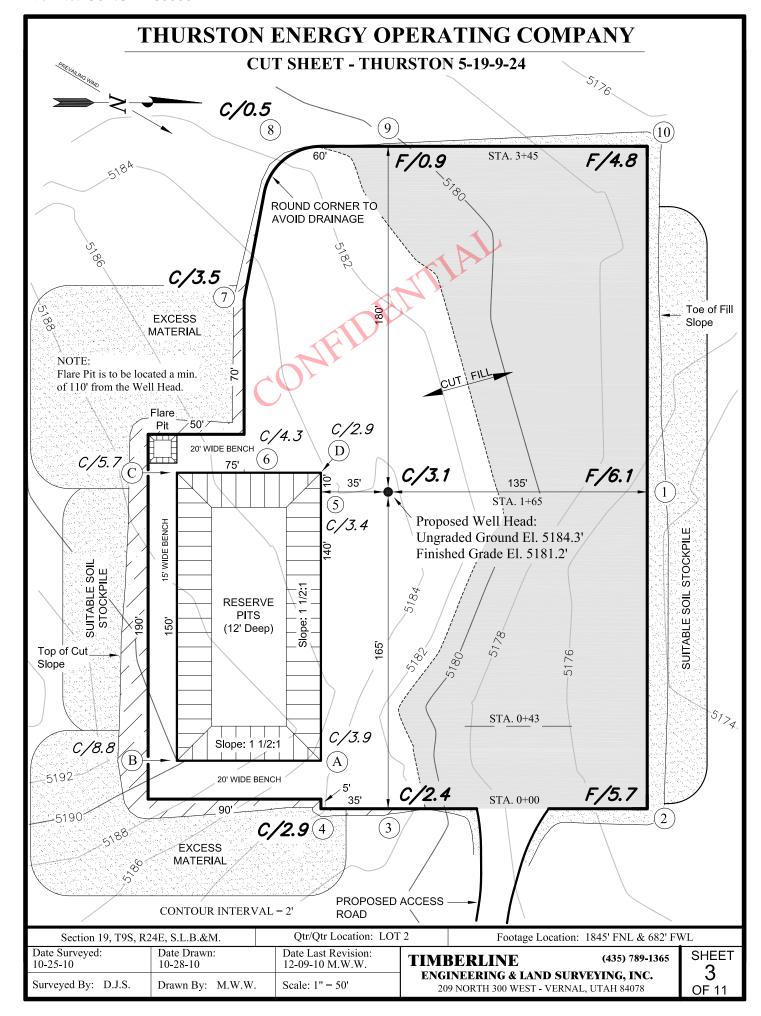
Date Last Revised:

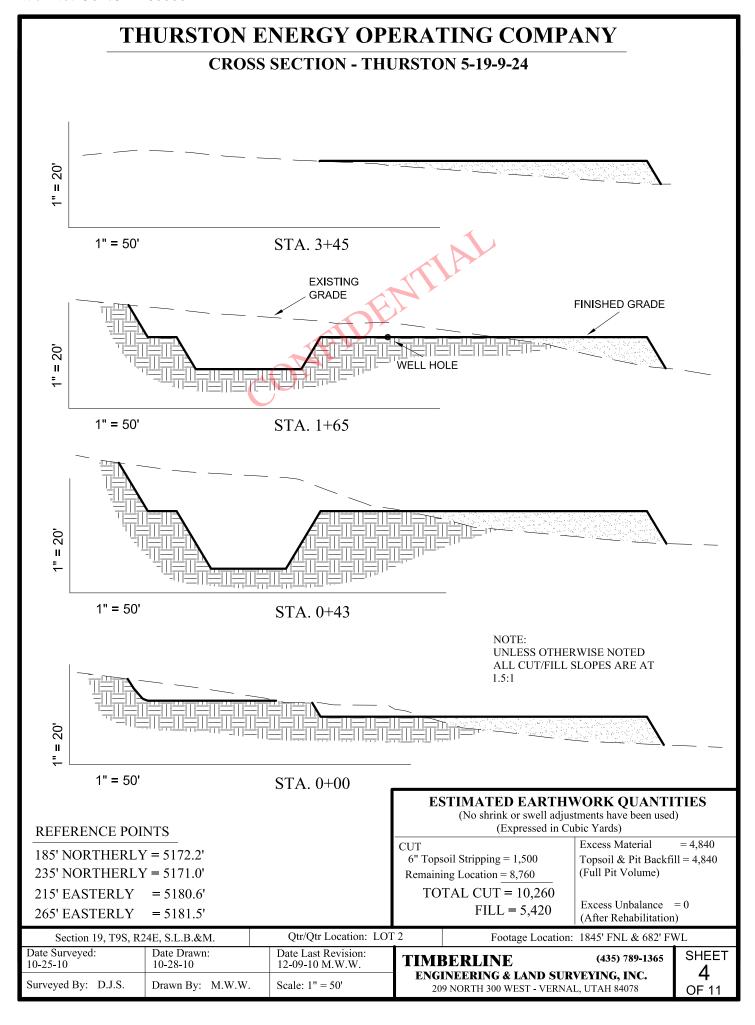
DATE PHOTOS TAKEN BY: D.J.S.

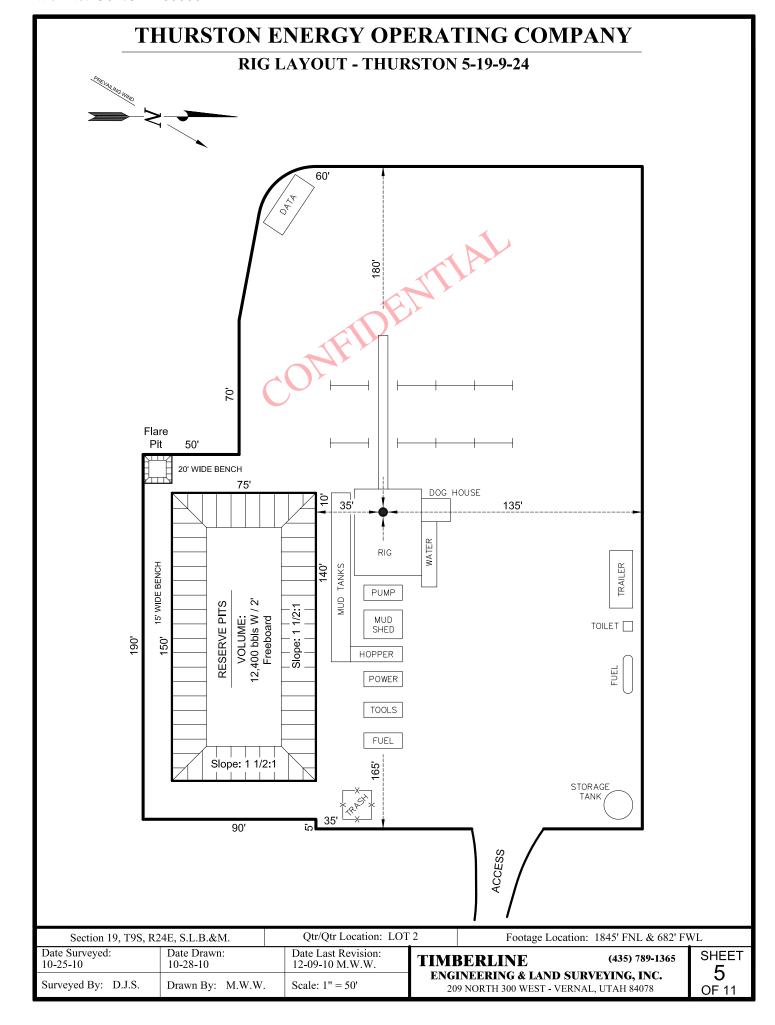
SHEET

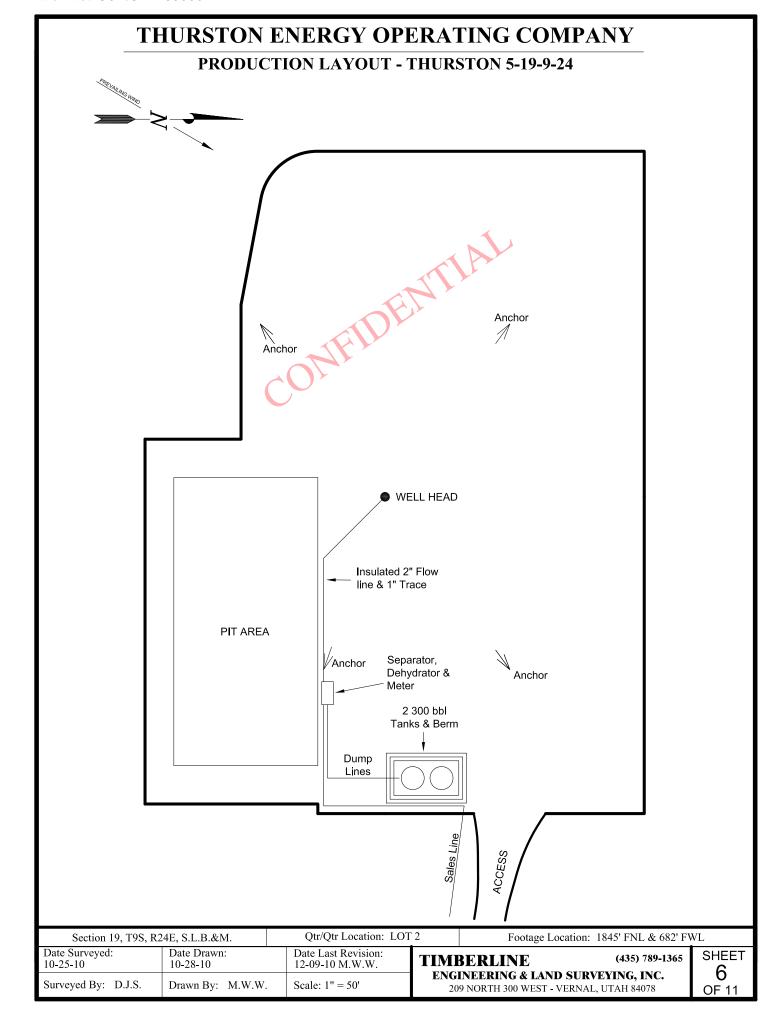
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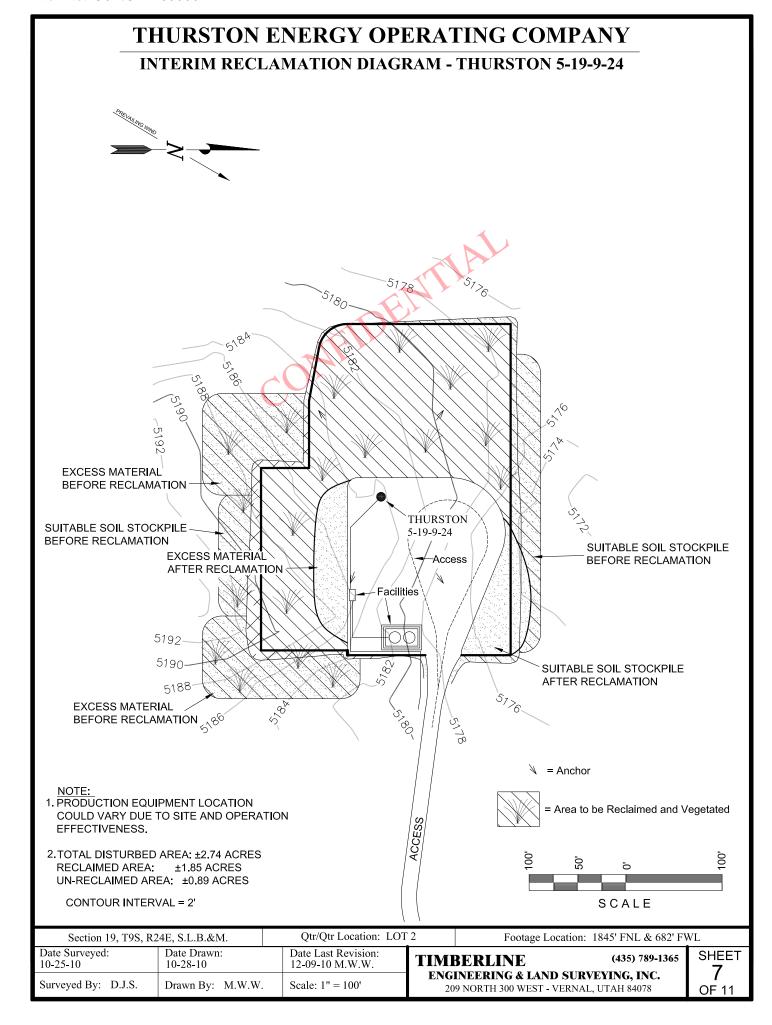


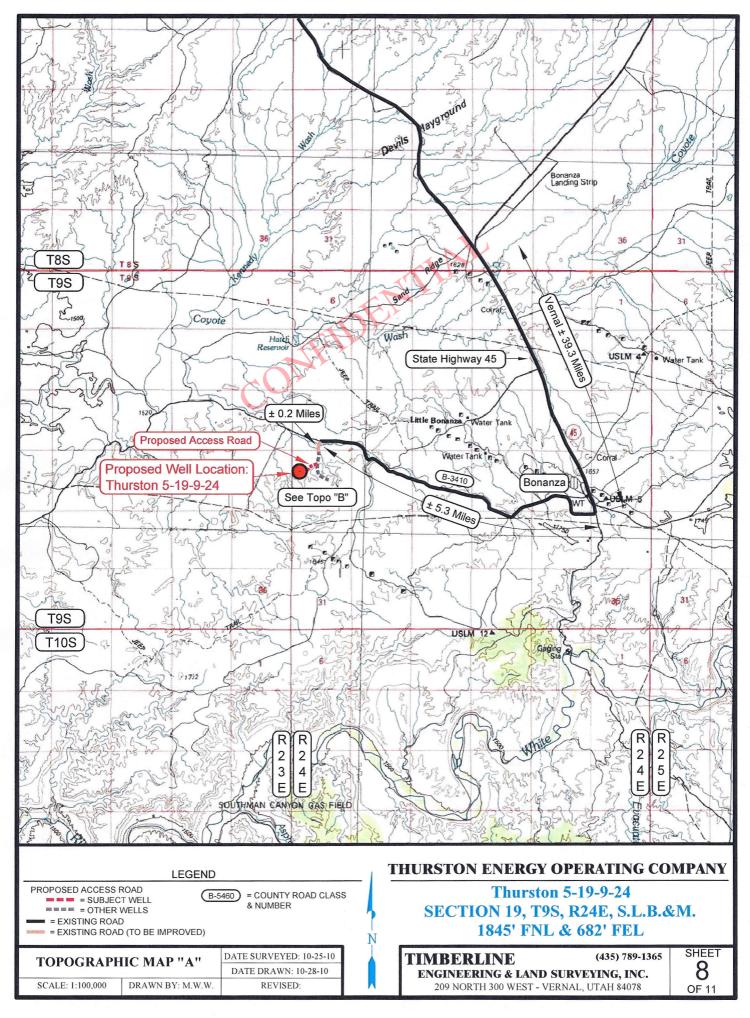


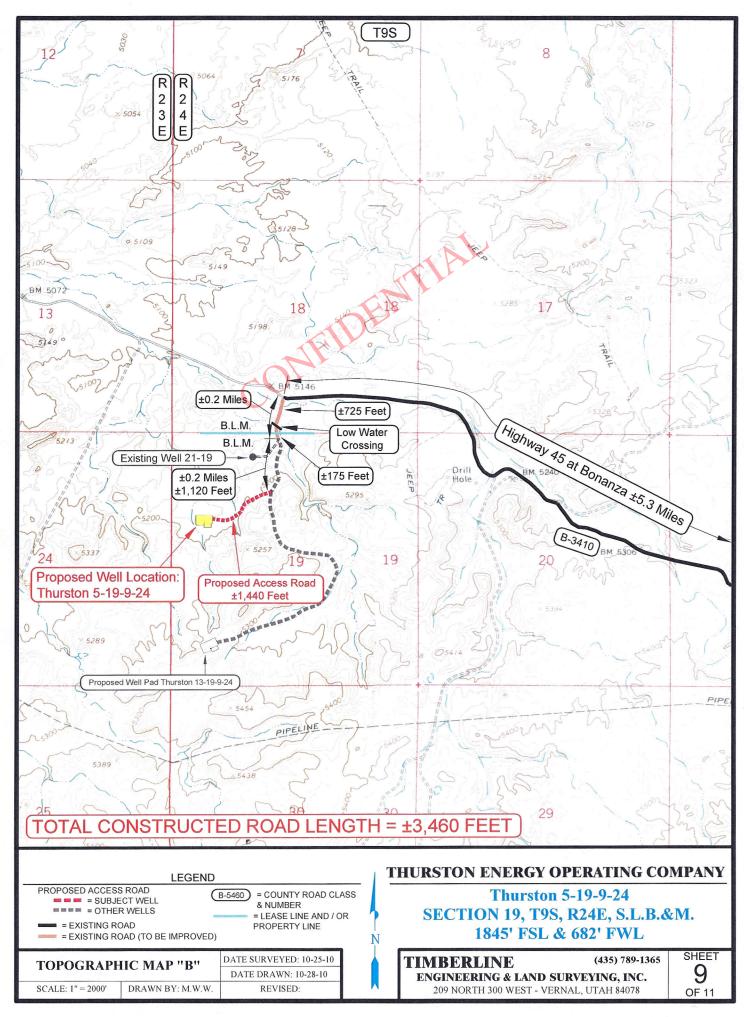


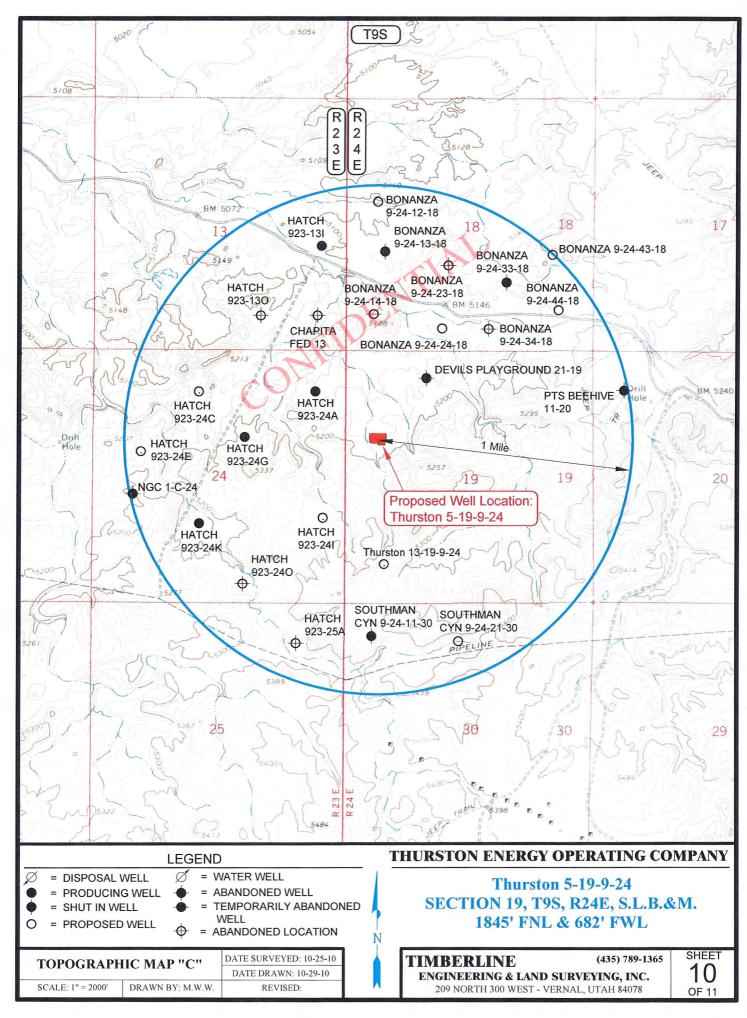


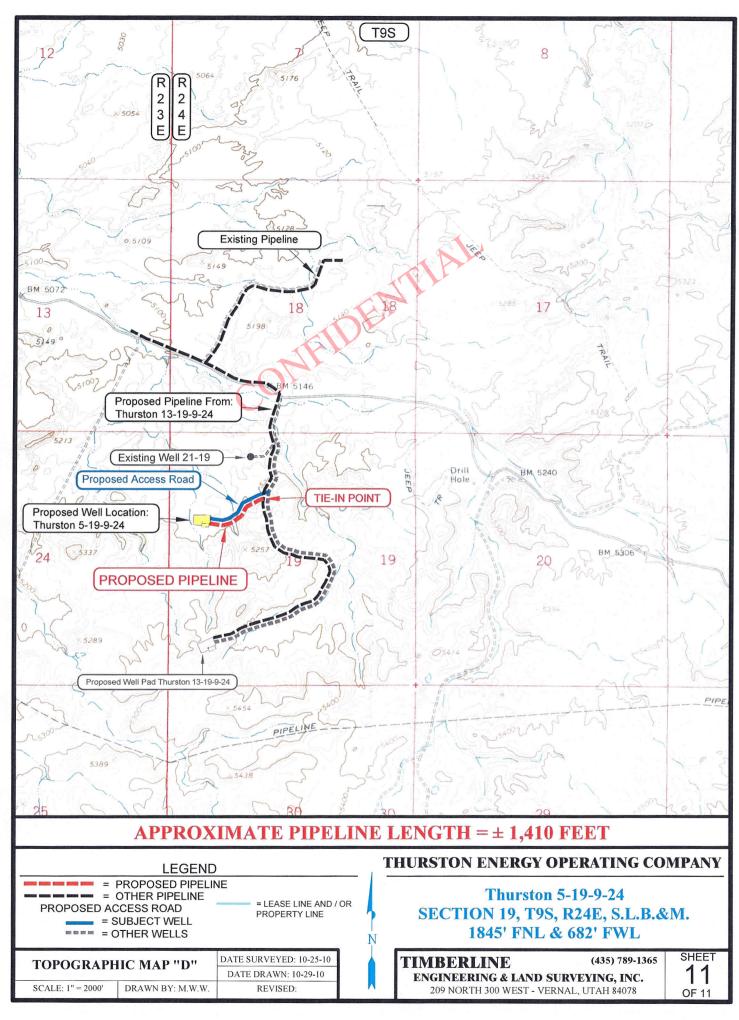








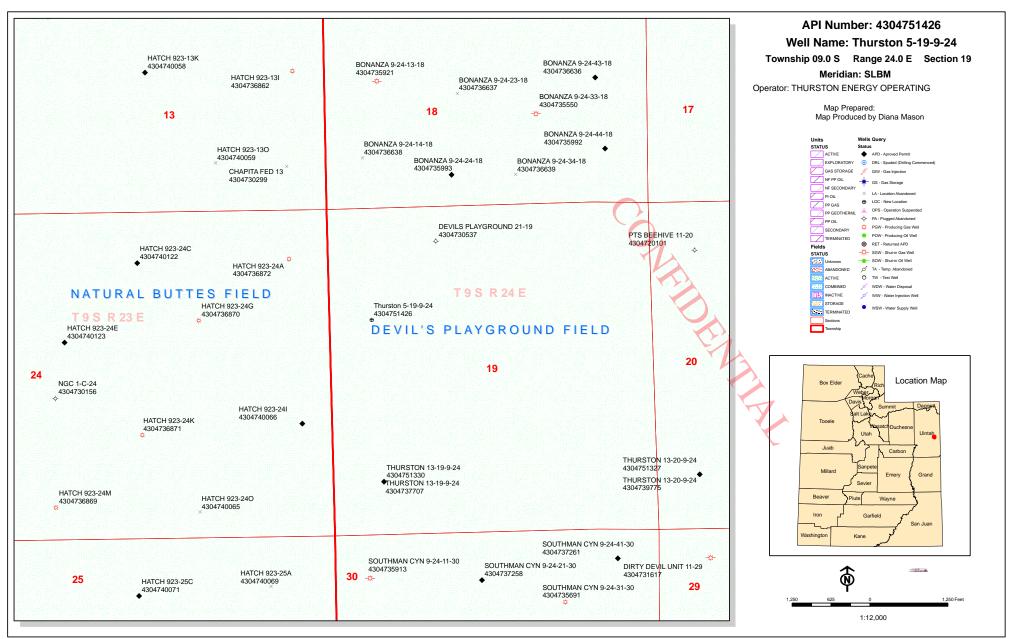




# THURSTON ENERGY OPERATING COMPANY Thurston 5-19-9-24 Section 19, T9S, R24E, S.L.B.&M.

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 36 miles to the junction of County B Road 3410 (this road is located approximately 0.5 miles south of Bonanza, Utah). Exit right and proceed in a westerly direction along County B Road 3410 approximately 5.3 miles to the junction of a reclaimed service road. Exit left and proceed in a southerly direction along the service road approximately 0.2 miles to the proposed access road for the Thurston 13-19-9-24 well location. Exit left and follow road flags in a southerly direction approximately 1,120 feet to the proposed access road for the Thurston 5-19-9-24 well location. Follow road flags in a southwesterly direction approximately 1,440 feet to the proposed location.

Total distance from Vernal, Utah to the proposed well location is approximately 45.3 miles.



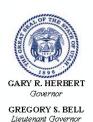
### WORKSHEET APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 12/27/2010 **API NO. ASSIGNED:** 43047514260000 WELL NAME: Thurston 5-19-9-24 **OPERATOR:** THURSTON ENERGY OPERATING (N2790) **PHONE NUMBER:** 435 789-8580 **CONTACT:** Russell H. Cox PROPOSED LOCATION: SWNW 19 090S 240E Permit Tech Review: **SURFACE: 1845 FNL 0682 FWL Engineering Review: BOTTOM:** 1845 FNL 0682 FWL Geology Review: **COUNTY: UINTAH LATITUDE:** 40.02366 **LONGITUDE:** -109.26279 **UTM SURF EASTINGS: 648244.00 NORTHINGS: 4431619.00** FIELD NAME: DEVILS PLAYGROUND LEASE TYPE: 1 - Federal **LEASE NUMBER:** U-31266 PROPOSED PRODUCING FORMATION(S): MESA VERDE **SURFACE OWNER:** 1 - Federal **COALBED METHANE: NO RECEIVED AND/OR REVIEWED: LOCATION AND SITING:**  PLAT R649-2-3. Bond: FEDERAL - UT-000181 Unit: **Potash** R649-3-2. General Oil Shale 190-5 Oil Shale 190-3 R649-3-3. Exception Oil Shale 190-13 ✓ Drilling Unit **Water Permit:** White River Permit #49-2286 Board Cause No: Cause 179-15 **RDCC Review:** Effective Date: 7/17/2008 Siting: 460' Fr Exterior Lease Boundary **Fee Surface Agreement Intent to Commingle** R649-3-11. Directional Drill **Commingling Approved** Presite Completed **Comments:** 

Stipulations:

4 - Federal Approval - dmason

API Well No: 43047514260000



# State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

### **Permit To Drill**

\*\*\*\*\*

**Well Name:** Thurston 5-19-9-24 **API Well Number:** 43047514260000

Lease Number: U-31266 Surface Owner: FEDERAL Approval Date: 12/28/2010

Issued to:

THURSTON ENERGY OPERATING, 365 W. 50 N. Ste W-8, Vernal, UT 84078

### **Authority:**

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 179-15. The expected producing formation or pool is the MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

### **Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

### **Conditions of Approval:**

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

### **Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

• Within 24 hours following the spudding of the well – contact Carol Daniels at 801-538-5284 (please leave a voicemail message if not available) OR

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at https://oilgas.ogm.utah.gov

### **Reporting Requirements:**

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month

API Well No: 43047514260000

- Requests to Change Plans (Form 9) due prior to implementation
- Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
- Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

Approved By:

For John Rogers Associate Director, Oil & Gas Form 3160-3 (August 2007)

### UNITED STATES DEPARTMENT OF THE INTERIOR

FORM APPRO	VED
OMB No. 1004-	0137
Expires July 31,	2010

	5.	Lease Serial	No.
ı	1_3	1266	

BUKEAU OF LAND MAN	NAGEN	MENT		0 0 1200	
APPLICATION FOR PERMIT TO	DRIL	L OR REENTER		6. If Indian, Allote	e or Tribe Name
la. Type of work: DRILL REENT	ER			7. If Unit or CA Ag	reement, Name and No.
lb. Type of Well: Oil Well Gas Well Other	[	✓ Single Zone  Multi	ple Zone	8. Lease Name and Thurston 5-19-9-2	
2. Name of Operator Thurston Energy Operating Company				9. API Well No.	
				43.047	-51426
3a. Address 360 W 50 N W-8 Vernal, UT 84078	3b. Phone No. (include area code) 435-789-8580		10. Field and Pool, or Devil's Playground		
4. Location of Well (Report location clearly and in accordance with ar	ty State re	equirements.*)		11. Sec., T. R. M. or	Blk. and Survey or Area
At surface 1845' FNL 682' FWL SWNW SEc 19, T9S, RATE LOT 2	24E SL	B&M		Sec. 19, T9S, R24	
<ol> <li>Distance in miles and direction from nearest town or post office*</li> <li>3 miles south of Vernal, Utah</li> </ol>				12. County or Parish Uintah	13. State Ut
15. Distance from proposed* 682' location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease 17. Spacin 40		g Unit dedicated to this	well	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.			20. BLM/F UTB000	M/BIA Bond No. on file 00181	
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Ap	oproximate date work will sta	rt*	23. Estimated durati	on
5184.3 GL	04/01	1/2011		30 days	
	24.	Attachments		-	
The following, completed in accordance with the requirements of Onshor	re Oil and	d Gas Order No.1, must be a	ttached to thi	is form:	
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is on National Forest System SUPO must be filed with the appropriate Forest Service Office).</li> </ol>	Lands, t	Item 20 above).  5. Operator certific	ation		n existing bond on file (see
25. Signature		Name (Printed/Typed) Patti A. Cox			Date 12/29/2010
Title Business Manager					
Approved by (Signapure)	l	Name (Printed Typed) K	enczl	ka	Date JUN 2 8 201
Assistant Field Manager Lands & Mineral Resources	(	Office VERNA	AL FIEI	LD OFFICE	7,000

11

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

**CONDITIONS OF APPROVAL ATTACHED** 

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**NOTICE OF APPROVAL** 

(Continued on page 2)

\*(Instructions on page 2)

DIV. OF OIL, GAS & MINING





### UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT VERNAL FIELD OFFICE**

170 South 500 East **VERNAL, UT 84078**  (435) 781-4400



### CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company: Well No:

API No:

Thurston Energy Operating Company Location:

Thurston 5-19-9-24

43-047-51426

Lease No:

Lot 2, Sec. 19, T9S, R24E

UTU-31266

Agreement:

N/A

**OFFICE NUMBER:** 

(435) 781-4400

OFFICE FAX NUMBER: (435) 781-3420

### A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

### NOTIFICATION REQUIREMENTS

Location Construction (Notify Environmental Scientist)	-	Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	-	Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	_	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: ut vn opreport@blm.gov.
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

Page 2 of 7 Well: Thurston 5-19-9-24

6/13/2011

### SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

Well Numbers: 8-9-9-24, 5-19-9-24, and 5-17-9-24 DOI-BLM-UT-G010-2011-0249-EA

 All new and replacement internal combustion gas field engines of less than or equal to 300 designrated horsepower must not emit more than 2 gms of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.

- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO<sub>x</sub> per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop
  work and contact the Authorized Officer (AO). A determination will be made by the AO as to what
  mitigation may be necessary for the discovered paleontologic material before construction can
  continue.
- Additional Surface Conditions of Approval or monitoring are listed in the Surface Use Plan of the APDs.
- The 8-9-9-24 location is near the Kennedy Wash Floodplain. Thurston has agreed to double the liner for the reserve pit on this location to further prevent any hydrocarbons from getting into the channel itself.
- Corner # 8 on the 5-19-9-24 location needs to be brought in and rounded to get it away from small wash.
- A ROW for the 5-19-9-24 needs to be updated or approved prior to any upgrades to the existing access road.
- All production equipment will be painted Covert Green to help blend in with surrounding vegetation.
- On all locations a permanent reference point must be established prior to any reclamation activities.
   This reference point helps to establish the criteria for successful reclamation based on the Green River District Reclamation Guidelines.
- A dike/berm would be constructed completely around those production facilities which contain fluids (i.e., production tanks, produced water tanks, and/or heater-treater). It would be constructed of compacted subsoil, be impervious, hold 110% of the capacity of the largest tank, and be independent of the back cut.
- The road surface and shoulders will be kept in a safe and usable condition and will be maintained in accordance with the original construction standards. All drainage ditches will be kept clear. The existing access road surface and pad area will be kept free of trash during all operations. All traffic will be confined to the approved disturbed surface area.

Page 3 of 7 Well: Thurston 5-19-9-24

6/13/2011

• The operator will control noxious weeds and invasive plants along corridors for roads, pipelines, well sites, or other applicable facilities, through a Pesticide Use Permit (PUP).

- Due to the occurrence of vertebrate fossils a permitted paleontologist must be present to monitor the construction of the proposed access road for well pad 5-19-9-24.
- An Interim Surface Reclamation Plan for surface disturbance on the well pad, access road, and pipeline has been completed and will be followed for reclamation of the surface. At a minimum, this will include the Best Management Practice of the reshaping of the pad to the original contour to the extent possible; the re-spreading of the top soil up to the rig anchor points; and, reseeding the unused area using appropriate reclamation methods (Thurston's reclamation plan).

The interim/final seed mix for reclamation will be:

Table 2.3.5 Interim/Final Reclamation Seed Mixture

Common name	Latin name	lbs/acre	Recommended seed planting depth
Squirreltail grass	Elymus elymoides	3.0	1/4 - 1/2"
Siberian Wheatgrass	Agropyron fragile	2.0	1/2"
Needle and Thread	Stipa comata	3.0	1/2"
Bluebunch Wheatgrass	Pseudoroegneria spicata	3.0	1/2"
Shadscale	Atriplex confertifolia	0.50	1/2"
Gardner's saltbush	Atriplex gardneri	0.50	1/2"
Scarlet globemallow	Sphaeralcea coccinea	0.10	1⁄8□− 1⁄4"

- All pounds are pure live seed.
- All seed and mulch will be certified weed free.
- Rates are set for drill seeding; double rate if broadcasting.
- Following well plugging and abandonment, the location, access roads, pipelines, and other facilities shall be reclaimed. All disturbed surfaces shall be reshaped to approximate the original contour; the top soil re-spread over the surface; and, the surface re-vegetated. The surface of approved staging areas where construction activities did not occur may require disking or ripping and reseeding.

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### DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

#### SITE SPECIFIC DOWNHOLE COAs:

- Production casing cement shall be brought up and into the surface casing. The minimum cement top is 200 ft above the surface casing shoe.
- A variance is granted for Onshore Order #2 Drilling Operations III. E. "Blooie line discharge 100 feet from well bore and securely anchored" Blooie line can be 40 feet for air rig drilling operations.
   All requirements will be adhered to covering air/gas drilling operations as described in Onshore Order #2 III. E. 1. Drilling Operations, Special Drilling Operations, air/gas drilling.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

### DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily
  drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order
  No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a
  test pump with a chart recorder and <u>NOT</u> by the rig pumps. Test shall be reported in the driller's
  log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- Cement baskets shall not be run on surface casing.
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.

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• The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM,
   Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the <u>top of cement</u> and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well in LAS format to UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

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### **OPERATING REQUIREMENT REMINDERS:**

 All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.

- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at <a href="https://www.ONRR.gov">www.ONRR.gov</a>.
- Should the well be successfully completed for production, the BLM Vernal Field office must be
  notified when it is placed in a producing status. Such notification will be by written communication
  and must be received in this office by not later than the fifth business day following the date on
  which the well is placed on production. The notification shall provide, as a minimum, the following
  informational items:
  - o Operator name, address, and telephone number.
  - Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - Unit agreement and/or participating area name and number, if applicable.
  - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs.

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6/13/2011

core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office
  Petroleum Engineers will be provided with a date and time for the initial meter calibration and all
  future meter proving schedules. A copy of the meter calibration reports shall be submitted to the
  BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid
  hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall
  be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering
  lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a
  suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be
  obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover
  equipment shall be removed from a well to be placed in a suspended status without prior approval
  of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior
  approval of the BLM Vernal Field Office shall be obtained and notification given before resumption
  of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

Sundry Number: 23254 API Well Number: 43047514260000

	FORM 9				
DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING			5.LEASE DESIGNATION AND SERIAL NUMBER: U-31266		
SUNDR	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:				
Do not use this form for procurrent bottom-hole depth, IFOR PERMIT TO DRILL form	7.UNIT or CA AGREEMENT NAME:				
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: THURSTON 5-19-9-24				
2. NAME OF OPERATOR: THURSTON ENERGY OPERA	9. API NUMBER: 43047514260000				
<b>3. ADDRESS OF OPERATOR:</b> 365 W. 50 N. Ste W-8 , Vernal, UT, 84078  PHONE NUMBER: 214 704-3896 Ext			9. FIELD and POOL or WILDCAT: DEVILS PLAYGROUND		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1845 FNL 0682 FWL			COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNW Section: 19 Township: 09.0S Range: 24.0E Meridian: S			STATE: UTAH		
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA					
TYPE OF SUBMISSION					
-	ACIDIZE	ALTER CASING	CASING REPAIR		
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME		
2/22/2012	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE		
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION		
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK		
	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
SPUD REPORT Date of Spud:					
	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	L TEMPORARY ABANDON		
DRILLING REPORT Report Date:	L TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL		
	WATER SHUTOFF	SI TA STATUS EXTENSION	✓ APD EXTENSION		
	WILDCAT WELL DETERMINATION	OTHER	OTHER:		
12. DESCRIBE PROPOSED OR	COMPLETED OPERATIONS. Clearly show all p	ertinent details including dates, o	A CONTRACTOR OF THE CONTRACTOR		
	APD Extension.		Approved by the		
			Utah Division of Oil, Gas and Mining		
			Fabruary 00, 0040		
			Date: February 28, 2012		
			Ву:		
NAME (PLEASE PRINT) PHONE NUMBER		TITLE			
Kayti Hill 435 789-8580		Office Manager			
SIGNATURE N/A		<b>DATE</b> 2/22/2012			

Sundry Number: 23254 API Well Number: 43047514260000



### The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices** 

### Request for Permit Extension Validation Well Number 43047514260000

**API:** 43047514260000 **Well Name:** THURSTON 5-19-9-24

Location: 1845 FNL 0682 FWL QTR SWNW SEC 19 TWNP 090S RNG 240E MER S

Company Permit Issued to: THURSTON ENERGY OPERATING

Date Original Permit Issued: 12/28/2010

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

• If located on private land, has the ownership changed, if so, has the surface agreement been updated?  Yes  No
Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?      Yes      No
• Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?  Yes No
• Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?  Yes No
• Has the approved source of water for drilling changed?   Yes  No
<ul> <li>Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?</li> <li>Yes</li> <li>No</li> </ul>
• Is bonding still in place, which covers this proposed well?   Yes   No
natura. Kayti Hill Data. 2/22/2012

Signature: Kayti Hill Date: 2/22/2012

Title: Office Manager Representing: THURSTON ENERGY OPERATING



# State of Utah

### DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

March 4, 2013

Thurston Energy Operating 365 W. 50 N. Ste. W-8 Vernal, UT 84078

Re: APD Rescinded – Thurston 5-19-9-24, Sec. 19, T.9, R.24E,

Uintah County, Utah API No. 43-047-51426

Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on December 28, 2010. On February 28, 2012 the Division granted a one-year APD extension. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective March 4, 2013.

A new APD must be filed with this office for approval <u>prior</u> to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Diana Masor

**Environmental Scientist** 

cc: Well File

Bureau of Land Management, Uintah





# **United States Department of the Interior**

### BUREAU OF LAND MANAGEMENT

Green River District Vernal Field Office 170 South 500 East Vernal, UT 84078

http://www.blm.gov/ut/st/en/fo/vernal.html



JAN 24 2014

IN REPLY REFER TO: 3160 (UTG011)

Chris Curton
Thurston Energy Operating Company
4925 Greenville Ave., #840
Dallas, TX 75206

43 047 51426

Re:

Notice of Expiration

Well No. Thurston 5-19-9-24 Lot 2, Sec. 19, T9S, R24E Uintah County, Utah Lease No. UTU-31266

RECEIVED

FEB 1 4 2014

DIV. OF OIL, GAS & MINING

Dear Mr. Curton:

The Application for Permit to Drill (APD) for the above-referenced well was approved on June 28, 2011. No extension of the original APD was requested. According to our records, no known activity has transpired at the approved location. In view of the foregoing, this office is notifying you that the approval of the referenced application has expired. If you intend to drill at this location in the future, a new Application for Permit to Drill must be submitted.

This office requires a letter confirming that no surface disturbance has been made for this drill site. Any surface disturbance associated with the approved location of this well is to be rehabilitated. A schedule for this rehabilitation must be submitted to this office. Your cooperation in this matter is appreciated.

If you have any questions regarding this matter, please contact Robin R. Hansen at (435) 781-3428.

Sincerely,

/s/ Jerry Kenczka

Jerry Kenczka Assistant Field Manager Lands & Mineral Resources

CC:

**UDOGM** 

bcc:

Well File

I&E Asst.